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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,851	12/31/2003	Vadim Yevgenyevich Banine	081468-0307473	2813

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EXAMINER

RUTLEDGE, DELLA J

ART UNIT PAPER NUMBER

2851

DATE MAILED: 03/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/748,851

Applicant(s)

BANINE ET AL.

Examiner

D. Rutledge

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 December 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5,9-14,17-27,29-33 and 35-59 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-14,17-19,29-33,35-37 and 41-53 is/are allowed.
- 6) ☒ Claim(s) 1-4,20-22,24 and 54-57 is/are rejected.
- 7) ☒ Claim(s) 9,10,25-27 and 59 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 – 4, 20 – 22, 24 and 54 – 57 are rejected under 35 U.S.C. 102(e) as being anticipated by Melnychuk et al. (US Pub 2005/0230645).

The reference discloses in Fig. 4C an EUV source for a lithographic apparatus. The components for a lithographic apparatus, such as an illumination and projection system and supports for the patterning means and substrate are implicit. In paragraphs [174 – 180, 279] the reference states that the effectiveness of the debris shield, which comprises the debris mitigation system, may enhanced by adding a magnets to produce a magnetic field. The magnetic field is induced by a pulsed current, thus turning the field on and off. (claims 1,2,4) In regard to Claims 2, 21, 55 – 57, the debris mitigation shield has a plurality of debris trapping surfaces, see at least Figs. 7A, 9A. In regards to claims 3, 4, 22, the particles a caused to move toward the surfaces of the debris shield. In regard to claims 20, 54, the particles form a curved trajectory as a result of the magnetic field.

***Claim Rejections - 35 USC § 103***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 5m 23 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Melnychuk et al. (US Pub 2005/0230645).

The reference does not disclose that a solenoid is used to produce the magnetic field, but since a solenoid is a commonly used device for producing the magnetic field, one of ordinary skill in the art would be motivated to use a solenoid to produce the magnetic field.

***Allowable Subject Matter***

5. Claims 9, 10, 24 – 27 and 59 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 11 – 14, 17 – 19, 29 – 33, 35 – 37 and 41 – 53 are allowed.

7. The following is a statement of reasons for the indication of allowable subject matter: the prior art does not teach at applying a gradient to the magnetic field.

***Response Data***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. Rutledge whose telephone number is (571) 272-2127. The examiner can normally be reached on Mon - Thurs, 6:00 AM - 4:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
D. Rutledge  
Primary Examiner  
Art Unit 2851

dr  
3/6/06